

REMARKS/ARGUMENTS

The Applicants have carefully considered this application in connection with the Examiner's Action and respectfully request reconsideration of this application in view of the foregoing amendment and the following remarks.

The Applicants originally submitted Claims 1-18 in the application. Previously, the Applicants added new Claims 19-20. At this time, the Applicants have amended Claim 1 and 10, and have canceled Claims 2 and 11. No other claims have been amended, canceled nor added. Accordingly, Claims 1, 3-10, and 12-20 are currently pending in the application.

I. Rejection of Claims 1-3 and 7 under 35 U.S.C. §102

The Examiner has rejected Claims 1-3 and 7 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,514,859 to Erhardt, *et al.* ("Erhardt"). Independent Claims 1 and 10 currently include the element of forming a blocking layer over source/drain regions in a step, the blocking layer comprising a metal silicide, and forming a silicided gate electrode in a later step. Erhardt fails to disclose this element.

Erhardt is directed to a method of silicide formation with a double gate silicide. (Title). Erhardt teaches that a gate structure comprising a gate oxide **103** and a polysilicon gate electrode **112** is formed over a semiconductor substrate **110** having source/drain regions **102, 104** therein. Erhardt then teaches that the polysilicon gate electrode **112** is silicided, thereby forming a silicided layer **136**. Thereafter, Erhardt teaches that silicided layers **138, 140**, may be formed over the source/drain regions **102, 104**. Accordingly, Erhardt teaches that its polysilicon gate electrode **112** is silicided

prior to forming silicided layers **138, 140** (e.g., silicided blocking layers in one instance) over the source/drain regions **102, 104**, which is in direct contrast to that which is presently claimed.

Therefore, Erhardt does not disclose each and every element of the claimed invention and as such, is not an anticipating reference. Because Claims 2-3 and 7 are dependent upon Claim 1, Erhardt also cannot be an anticipating reference for Claims 2-3 and 7. Accordingly, the Applicants respectfully request the Examiner to withdraw the §102 rejection with respect to these Claims.

II. Rejection of Claims 1-3, 7 and 9 under 35 U.S.C. §102

The Examiner has rejected Claims 1-3, 7 and 9 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,562,718 to Xiang, *et al.* ("Xiang"). Independent Claims 1 and 10 currently include the element of forming a blocking layer over source/drain regions in a step, the blocking layer comprising a metal silicide, and forming a silicided gate electrode in a later step. Xiang fails to disclose this element.

Xiang is directed to a process for forming fully silicided gates. (Title). Xiang teaches that a gate structure comprising a gate oxide **12** and a polysilicon gate electrode **13** is formed over a semiconductor substrate **10** having source/drain regions **11A, 11B** therein. Xiang then teaches that the polysilicon gate electrode **13** and source/drain regions **11A, 11B** are simultaneously silicided, thereby forming a nickel silicided layer **31** and nickel silicided layers **30**, respectively. Accordingly, Xiang teaches that its nickel silicided layer **31** and nickel silicided layers **30** are simultaneously formed, which is in direct contrast to that which is presently claimed.

Therefore, Xiang does not disclose each and every element of the claimed invention and as such, is not an anticipating reference. Because Claims 2-3, 7 and 9 are dependent upon Claim 1, Xiang also cannot be an anticipating reference for Claims 2-3, 7 and 9. Accordingly, the Applicants respectfully request the Examiner to withdraw the §102 rejection with respect to these Claims.

III. Rejection of Claims 4-6 and 8 under 35 U.S.C. §103

The Examiner has rejected Claims 4-6 and 8 under 35 U.S.C. §103(a) as being unpatentable over Erhardt or Xiang in view of U.S. Patent No. 6,821,887 to Wieczorek, *et al.* ("Wieczorek"). As previously indicated, independent Claims 1 and 10 currently include the element of forming a blocking layer over source/drain regions in a step, the blocking layer comprising a metal silicided, and forming a silicided gate electrode in a later step. As previously established, Erhardt and Xiang each fail to disclose these elements. Erhardt and Xiang further fail to suggest these elements. Namely, Erhardt and Xiang fail to suggest these elements because they specifically teach a different order of manufacture than presently claimed.

Wieczorek fails to correct the deficiencies of Erhardt and Xiang. The Examiner is offering Wieczorek for the sole proposition that the silicided gate electrode and metal silicided regions may comprise different materials, and that the blocking layer may have a thickness ranging from about 10 nm to about 35 nm. Without even addressing whether the Examiner's proposition is accurate, a teaching or suggestion that the silicided gate electrode and metal silicided regions may comprise different materials, and that the blocking layer may have a thickness ranging from about 10 nm to about 35 nm is entirely different from a teaching or suggestion of forming a blocking layer over

source/drain regions in a step, the blocking layer comprising a metal silicided, and forming a silicided gate electrode in a later step, as is currently claimed. Accordingly, Wieczorek also fails to teach or suggest this claimed element.

Therefore, Erhardt and Xiang alone or in combination with Wieczorek, fails to teach or suggest the invention recited in independent Claims 1 and 10 and their dependent claims, when considered as a whole. Accordingly, the combination fails to establish a prima facie case of obviousness with respect to these claims. Claims 4-6 and 8 are therefore not obvious in view of the combination.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claims 4-6 and 8 under 35 U.S.C. §103(a). The Applicants therefore respectfully request the Examiner withdraw the rejection.

IV. Rejection of Claims 10-12, 16 and 18 under 35 U.S.C. §103

The Examiner has rejected Claims 10-12, 16 and 18 under 35 U.S.C. §103(a) as being unpatentable over Xiang in view of U.S. Patent No. 6,830,987 to Pelella, *et al.* ("Pelella"). As previously indicated, independent Claims 1 and 10 currently include the element of forming a blocking layer over source/drain regions in a step, the blocking layer comprising a metal silicided, and forming a silicided gate electrode in a later step. As established above, Xiang fails to teach or suggest this element.

Pelella fails to correct the deficiencies of Xiang. The Examiner is offering Pelella for the sole proposition of forming interconnects within dielectrics located over the substrate. Without even addressing whether the Examiner's proposition is accurate, a teaching or suggestion of forming interconnects within dielectrics located over the substrate is entirely different from a teaching or suggestion of forming a blocking layer over source/drain regions in a step, the blocking layer comprising a metal silicided, and forming a silicided gate electrode in a later step, as is currently claimed. Accordingly, Pelella also fails to teach or suggest this claimed element.

Therefore, Xiang alone or in combination with Pelella, fails to teach or suggest the invention recited in independent Claims 1 and 10 and their dependent claims, when considered as a whole. Accordingly, the combination fails to establish a prima facie case of obviousness with respect to these claims. Claims 10-12, 16 and 18 are therefore not obvious in view of the combination.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claims 10-12, 16 and 18 under 35 U.S.C. §103(a). The Applicants therefore respectfully request the Examiner withdraw the rejection.

V. Rejection of Claims 13-15 and 17 under 35 U.S.C. §103

The Examiner has rejected Claims 13-15 and 17 under 35 U.S.C. §103(a) as being unpatentable over Xiang in view of Pelella and further in view of Wieczorek. As previously indicated, independent Claims 1 and 10 currently include the element of forming a blocking layer over source/drain regions in a step, the blocking layer comprising a metal silicided, and forming a silicided gate electrode in a later step. As established above, each of Xiang, Pelella and Wieczorek individually fail to teach or suggest this element. Accordingly, the combination must also fail to teach or suggest this element.

Therefore, Xiang alone or in combination with Pelella and/or Wieczorek, fails to teach or suggest the invention recited in independent Claims 1 and 10 and their dependent claims, when considered as a whole. Accordingly, the combination fails to establish a prima facie case of obviousness with respect to these claims. Claims 13-15 and 17 are therefore not obvious in view of the combination.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claims 13-15 and 17 under 35 U.S.C. §103(a). The Applicants therefore respectfully request the Examiner withdraw the rejection.

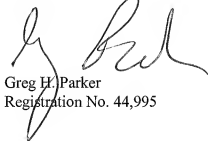
VI. Conclusion

In view of the foregoing amendment and remarks, the Applicants now see all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicit a Notice of Allowance for Claims 1, 3-10, and 12-20.

The Applicants request the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application. The Commissioner is hereby authorized to charge any fees, credits or overpayments to Deposit Account 20-0668.

Respectfully submitted,

HITT GAINES, PC

A handwritten signature in black ink, appearing to read "Greg H. Parker", is written over the typed name and registration number.

Greg H. Parker
Registration No. 44,995

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P.O. Box 832570
Richardson, Texas 75083
(972) 480-8800